About this Module
Students find out how to access public emergency information, including cyclone and flood alerts and warnings. Students learn about flood risks in their local community, the role of State Emergency Service (SES) volunteers and what the SES can do to help communities in a cyclone and/or flood emergency.

Background Information
Cyclone
In Western Australia, the Department of Fire and Emergency Services (DFES) is responsible for activating and coordinating the emergency response to tropical cyclone.

The Bureau of Meteorology (BoM) has three Tropical Cyclone Warning Centres (TCWCs) located in Perth, Darwin and Brisbane. These centres use weather stations and observers on land, ships, aircraft, offshore oilrigs, satellite and radar imagery to detect cyclones and confirm their location and intensity. When a cyclone is within 250 kilometres of Western Australia it is tracked by radars located along the coastline at Wyndham, Broome, Port Hedland, Karratha, Dampier, Learmonth and Carnarvon. BoM is responsible for Tropical Cyclone Advice and Warnings and provide a Forecast Track Map to indicate where the cyclone is, where it is forecast to go, how intense it is likely to be and which communities are under threat. BoM issue a Cyclone Watch when damaging winds or gales are expected to affect communities within 48 hours and a Cyclone Warning within 24 hours.

The DFES’ Community Alert System uses colour-coded alerts to provide warnings and advice to communities in the cyclone’s path. The four stages of alerts are:

- **Blue Alert** – you need to start preparing for cyclonic weather, strong winds may occur within 48 hours. Be ready to change your travel plans.

- **Yellow Alert** – there is a high risk of destructive winds, take action and prepare to shelter from the cyclone.

- **Red Alert** – take shelter from the cyclone, destructive winds are likely to occur very soon.

- **All Clear with Caution** – the cyclone danger has passed but take care to avoid the dangers caused by damage.

**Flood**

Flood forecasting and warnings are provided by BoM’s national flood forecasting and warning service. BoM uses weather forecasts and hydrologic models, as well as observing rainfall and streamflow to forecast and warn DFES about potential and ongoing flood situations.

BoM issues flood warnings to the public in the form of a Flood Watch or Flood Warning. DFES then issues Community Alerts to keep people informed and safe, including advice about what people need to do before, during and after a flood.

Preparedness and general information on cyclones, floods and other natural hazard emergencies can be found online at [www.dfes.wa.gov.au/safetyinformation](http://www.dfes.wa.gov.au/safetyinformation).

**Where to find Alerts and Warnings**

**Emergency WA Website** ([www.emergency.wa.gov.au](http://www.emergency.wa.gov.au))

Emergency WA is a quick and easy way to access emergency information, including current cyclone and flood alerts and warnings. This is a Western Australian map-based site coordinated by DFES. Information on the site is provided by DFES, the Department of Biodiversity Conservation and Attractions Parks and Wildlife Service, BoM and Geoscience Australia.

**Emergency Information Line and Social Media**

DFES provides an Emergency Information Line 13 DFES or 13 3337, as well as twitter (@dfeswa) and Facebook (Department of Fire and Emergency Services WA) accounts. Satellite phones can call +61 8 9395 9395 for emergency information.

**Radio and Television**

Emergency alerts and warnings are broadcast on ABC local radio and 6PR (in the Perth metropolitan area). It is important to have a **battery-operated (or wind-up) radio** to listen for cyclone alerts as there is often a high chance of the power supply being disrupted.

**Emergency Alert – Phone and Mobile Alerts** ([www.emergencyalert.gov.au](http://www.emergencyalert.gov.au))

Emergency Alert is another way of warning people about cyclones, floods, bushfires and other severe weather emergencies in (or near) their community. Emergency Alert is the national telephone warning system used by emergency services to send voice messages to landlines and text messages to mobile phones within a defined area about likely or actual emergencies. Students may receive these calls (when answering their home phone) or as text messages (on their personal mobile phone) and there is no opt out option. It is important to explain to children what to do if they receive an emergency warning call or message. If a child receives an emergency warning on their mobile phone while they are at school, they must tell a teacher straight away and follow the emergency procedures in place at their school. If they receive this message while home alone, they must find and tell a responsible adult (for example a neighbour), follow the directions of the message and move to a safer place. Children can call Triple Zero if an adult is not available to assist. People should not rely on receiving a warning message on their phone before they act.
Standard Emergency Warning Signal (SEWS)
SEWS is a distinctive siren sound to alert the community to the broadcast of urgent safety messages relating to a major emergency or disaster. It is played on the radio, television, public address systems and mobile sirens. If you hear a SEWS broadcast: stop what you are doing, listen carefully to the information provided and act as directed. SEWS is only sounded if there is a possible loss of life or a major threat to a larger number of properties, impact is expected within 12 hours, a large number of people need to be warned, or one or more incidents are classified as destructive.

State Emergency Service (SES) Assistance
SES is a volunteer division of DFES. SES volunteers play a vital role in responding to natural disasters and emergencies on behalf of the community. The SES will support communities under threat of cyclone and/or flood and will help them before, during and after impact. Call 132 500 for State Emergency Service (SES) assistance. Always call 000 in a life-threatening situation.

SES can help with the following emergencies: collapsed roofs and ceilings; making temporary emergency repairs to homes and buildings; removing fallen trees that have damaged homes and cars; sandbagging areas in danger of flooding; pumping out flood water; rescuing trapped or injured people; and, helping people relocate if they are in danger.

SES does not help with clearing debris and organising permanent repairs; fixing broken fences or removing trees that have fallen on fences; and, basic repairs that you can manage yourself.

No matter how you become aware of an emergency, take immediate action for your own safety. Do not rely on receiving a message on your phone.

Key Messages
- DFES produces safety information and emergency community alerts to help keep people informed and safe; advising them what to do before, during and after a cyclone and/or flood emergency.
- People can call triple zero (000) in a life threatening emergency or the State Emergency Service (SES) volunteers in a cyclone and/or flood emergency on 132 500.
- The Bureau of Meteorology (BoM) provides forecasts, warnings, weather observations and advice to the Western Australian community.

Learning Outcomes
1. Students understand what each coloured Cyclone Alert means and the urgency/immediacy for each alert.
2. Students understand the role of DFES and the Bureau of Meteorology in providing cyclone and/or flood alerts and warnings.
3. Students can list the various ways to find safety and emergency information about cyclones/floods and can explain/show how to find it.
4. Students discover their local risk for cyclone and flood through discussion with a representative from their local State Emergency Service (SES) or a local government representative.

Year Level
Year 4 to 6

Things you will need
- Internet access
- Video: Learning from the Past, Preparing for the Future
- DFES Cyclone and Flood Cyclone Alert System Factsheet 01
- DFES Cyclone Smart Community Alerts worksheet (enlarge to A3 size, if needed)
- From Rain to Warning information sheet
- Emergency WA website
- Standard Emergency Warning Signal (SEWS)
- DFES website www.dfes.wa.gov.au
- Emergency WA website www.emergency.wa.gov.au
- Emergency Alert website www.emergencyalert.gov.au
- ABC website www.abc.net.au/news/emergency/
- Social Media
  - @dfes_wa (twitter)
  - Department of Fire and Emergency Services WA (Facebook)
- Bureau of Meteorology website (BoM) www.bom.gov.au

Activity One: Cyclone Alerts and Warnings
1. Students view video: Learning from the Past, Preparing for the Future (8:00-9:03). Discuss as a group the four alerts (Blue, Yellow, Red and All Clear) and the important message for each alert.
2. Using this information and the DFES Cyclone and Flood Cyclone Alert System Factsheet 01, have students complete the Worksheet DFES Cyclone Smart Community Alerts.
3. Introduce students to the BoM website’s Tropical Cyclone Warning Services. Find out if there are any current cyclones.

Activity Two: Flood Alerts and Warnings
1. In Australia, BoM provide flood forecasting and warning services in each state and territory. In Western Australia, DFES will then issue Community Alerts to advise communities on what you need to do before, during and after a flood. Have students look at the From Rain to Warning information sheet. Students investigate the role of scientists (meteorologists, hydrologists) who forecast rain and predict river height and DFES' role in advising communities what to do.
2. Floods are unpredictable and destructive and they can happen in regions that have never seen rain. They can cause death and injuries, isolate communities, damage major infrastructure, cut essential services, destroy property and livelihoods. Students investigate what is a Flood Watch and when is it issued? What is the difference between a Flood Watch and a Flood Warning?

**Activity Three: Where to Find DFES Alerts and Warnings**

1. Students visit the DFES website (www.dfes.wa.gov.au) and in groups (or individually) investigate where they can find information about current warnings.
   - 132 500 (for SES emergency assistance)
   - 13 DFES (emergency information line)
   - Emergency WA (access from DFES website)

2. Students visit Emergency WA (www.emergency.wa.gov.au) to find current alerts and warnings in Western Australia. Students investigate:
   - Are there any cyclone and/or flood warnings?
   - Are there warnings for other hazards?
   - Are any of these warnings in your region or location?
   - Click on a warning and identify its location on the map and read advice or warning. Notice the information it includes: e.g. time, date, location, alert level, threat to lives or homes, what to do, road closures, conditions, what DFES is doing, any extra information, etc.
   - What other information can you find on this page?

3. What radio stations provide emergency alerts and warnings? (your local ABC)
   - ABC also provides an emergency page, where you can search warnings by each state www.abc.net.au/news/emergency/
   - Do other radio stations broadcast warnings in Western Australia?

4. Investigate whether DFES uses social media (twitter and Facebook)
   - What kind of information is posted on twitter and Facebook?

5. Students visit Emergency Alert www.emergencyalert.gov.au, the national telephone warning, sending out public warnings (voice messages to landlines and text messages to mobile phones)
   - Students investigate when these messages are sent and where to find out if you have to register to receive these messages

   - Students investigate what ‘situations of extreme danger’ the SEWS warning would be used in.

**Extension**

- BoM provides various warning services for tropical cyclones to the public. Students investigate the differences between a tropical cyclone seasonal outlook, a tropical cyclone outlook, a tropical cyclone watch and a tropical cyclone warning.
- How can DFES and communities benefit from having a tropical cyclone seasonal outlook?
In Your Community – *Meet your local State Emergency Service (SES)*

- If you can, organise a visit from the State Emergency Service (SES) to your school. Students can draft questions and provide them to the SES prior to their visit. (Alternatively, ask a WA Police, local government representative or other community member to discuss the importance of alerts, warnings and preparing for tropical cyclone or flood).

- Discuss the State Emergency Service’s (SES) role in a cyclone and/or flood emergency. Explain the SES role in preparing and responding to a tropical cyclone event and their active involvement in assisting the community during the colour-coded alerts. Ask your guest speaker to discuss the importance of following the alerts. Include when people should call 000 and when they should call the SES for assistance.

- Discuss SES’s role and equipment. Discuss areas that are at risk of flooding in your local community. Is your community (or parts of your community) likely to become isolated? Investigate whether your local shire has a relocation plan – what is it? Where would community members relocate? As a class, discuss what it is about this location that the local shire would choose it.